

Mr. Riki Ellison:

Good morning, ladies and gentlemen. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. I'm wishing you a good morning from Los Angeles, California. About five blocks from here, I was first introduced missile defense about 41 years ago in 1980. And today, we're also moving forward with our global space and missile defense program at USC. We're doing this all for the purpose and mission making our world a safer place. We believe the deployment, the development of missile defenses saves lives, deters conflicts and makes our world safer.

Mr. Riki Ellison:

And today's discussion is about that. We have fielded a phenomenal system that nobody really knows about that has been a highlight. It has offered deterrent. It has offered defense. It has saved thousands and thousands and thousands of lives in Afghanistan during the 20 years of that conflict. It helped save the lives, secured the airport of everyone on the evacuation. It is a special system. It is a system that's a pioneer system that was developed by a different military service, the Navy, fielded by a different military service, the Army, rapidly put together quickly because of the urgency of the need for this system. It is deployed and operational today in the Middle East on other forward operating bases saving lives and defending both our allies, the country's nationals, and our troops forward.

Mr. Riki Ellison:

We often talk about... Well, we do talk about the new strategic deterrent. In fact, the Army fires conference in Oklahoma, Fort Sill, significantly talked about that this week. We talk about strategic deterrence at a high level against our near peers. But at the low level, missile defense, rocket, counter rocket, counter mortar also does that effective deterrent to save and to stop not conflict, but be able to deter much more strikes on us than there were.

Mr. Riki Ellison:

So, today, we're going to study this. And we've brought the very best retired out of the Army air defense systems that were the critical decision makers to bring this capability forward, to implement it, and to make it is today. So, we're very, very honored to have with us Retired Lieutenant General Bob Lennox, Retired Brigadier General Randy McIntire, Retired Colonel Dave Shank, all three critical in making this system happen.

Mr. Riki Ellison:

So, today, we're going to have each one of them spend about 10 minutes talking about their thoughts on this program and their thoughts on the defense of fires in Afghanistan. And then, I will ask a question or two. And we'll move through those three speakers. And at the end, we'll have our new MBA board member, our senior fellow for INDOPACOM, Retired Major General Joaquin Malavet. We'll then field the questions by the public to go forward.

Mr. Riki Ellison:

So, it's a great honor for me to meet just a distinguished gentleman in all levels, well respected. Bob Lennox has been the commander of every command air defense has in the Army and ended up being the deputy director of CAPE which is the cost analysis for the Pentagon. So, I want everybody to welcome, and I welcome Retired General Bob Lennox. Bob.

LTG (Ret) Bob Lennox:

Hey, Riki. Thanks. And more importantly, thanks for what you do for missile defense and have done for missile defense. And I think I told you earlier that I haven't been doing a lot of air missile defense related discussions, topics since my retirement. When you mentioned it to me, I didn't want to miss the opportunity today to highlight and thank all those folks who brought this capability together and made this happen. So, thanks for allowing me to do this.

LTG (Ret) Bob Lennox:

I really appreciate it. I'm grateful to be on the panel with Brigadier General Retired Randy McIntire, Colonel Retired Dave Shank. You'll find pretty soon when I start talking about Randy the integral role that he played in all of this. And I told you in preparation, I had a very minor role. My minor role involved turning to Randy and say, "Fix everything and make it happen." And he'll describe all the hard stuff.

LTG (Ret) Bob Lennox:

But I do have some things I really do want to talk about. And I appreciate this opportunity. For me, it started when I took command of the Air Defense Artillery School in Fort Bliss, Texas in the summer of 2005.

LTG (Ret) Bob Lennox:

Now, folks had fielded the capability in theater and done the hard work of getting the first units and capability out the door. And I was able to track it from afar and with pride for what the air defense community did. And I say the air defense community, but it's a greater community. But first, let me thank and recognize the people in PD C-RAM. Mike Van Rassen was a program director, lieutenant colonel at the time, later continued on in that role as a civilian after he retired.

LTG (Ret) Bob Lennox:

But Mike put this team together. And it was a team to work with industry, work with other services to bring this capability to bear. And I think it's the highlight of the acquisition core. Randy and I talked about a few highlights in our career. This is certainly one of them. But when you watch the acquisition team, team with industry and bring this capability, put the pieces together to make it happen and save lives, it was simply amazing. And Mike was the quarterback for this effort.

LTG (Ret) Bob Lennox:

Hats off to Northrop Grumman and their team that brought FAAD/C squared capabilities to bear and took it from an amazing capability and made it awesome. And then, for Raytheon to do things like take the failing system primed and ready to go on a ship. Some cases come off ships, put them on trailers integrate it and make it happen.

LTG (Ret) Bob Lennox:

The vision that brought this together, the funding that came from the Army staff from Congress to make it happen was one of a kind. And I'm very proud to play a small role in this, a system that took air defense radars, the Sentinel to field artillery systems, their radars, the lightweight counter mortar radar, the counter fire radars integrating them into it and to make each piece make one plus one equal to three

LTG (Ret) Bob Lennox:

And the acquisition team, some say, I may be critical of the acquisition team from now occasionally, this is one of the major times I think they've just been a home run. And I think it would be right to emphasize their role and importance of their role to start.

LTG (Ret) Bob Lennox:

So, I really do think this was a joint effort. And at Fort Bliss, we welcome the sailors coming in to help us train. We welcome the soldiers that came in that we were able to put together a train as a team. And then, we worked with Major General Dave Ralston up at the Fires Center at that time at Fort Sill sending in his very best experts to help train us on the radars and systems.

LTG (Ret) Bob Lennox:

We had a great team at Fort Bliss Texas at that time. Dan Kirby and a team at Combat Developments did things like took the skills that we had for patriot for planning and for seeing where rounds were fired from and did analysis of where we should put these systems in theater. We shouldn't overlook what people and civilians and that directorate did.

LTG (Ret) Bob Lennox:

And I can remember with pride, we would analyze the results of all these engagements as they took place, pride that our team had been able to do this that were saving lives, that were frustrating the bad guys and were causing soldiers, sailors, civilians at these key bases in Iraq at the time to have confidence in the system and confidence that their Army, their Army team, this joint team would come together and save their lives.

LTG (Ret) Bob Lennox:

So, very proud to be involved with that in the middle of all the success that was happening early pretty soon after I took command, it dawned on me one day that we hadn't done anything really to think about the very next unit that was going to deploy and how they're going to be trained and how we're going to get that capability together to make that happen.

LTG (Ret) Bob Lennox:

So, I turned to the team at the 32nd AAMDC commanded by Rick McCabe and later [Fran Mann 00:10:50] and said, "Okay. Who's next? We've had the success. We've got these guys out the door. Who's next?" And they all looked at each other and said, "I don't know. We'll figure it out." So, again, they went put their heads together. We did get sailors. We got short-range air defense units. We got active at the time. But later, the National Guard to all contribute and make a difference.

LTG (Ret) Bob Lennox:

By the way, the operations officer at the 32nd AAMDC that time was a young, not so successful colonel by the name of Jim Dickinson who's, I guess, turned out pretty well in the end. We're very proud of Jim and his four-star US Space Command role that he's still playing to this day. So, I did turn to this young lieutenant colonel who was commanding the second battalion of the 6th Air Defense Artillery Brigade who was training Avenger soldiers and the Avenger was going out of the force at the time.

LTG (Ret) Bob Lennox:

It was there for the National Guard. And I said "Randy McIntire, we need you to head up this effort to figure out how we're going to..." And my hats off for Randy for doing that. He really made things happen. He and his team, Dave was part of the team, he and his team made that difference for us because they routinized all the things that we talk about that you do in Training Doctrine and Command creating the doctrine, the organization, who you need to deploy, making sure the material was there and synchronized for them when they needed it, trained all these folks in new and strange systems, felt the leadership.

LTG (Ret) Bob Lennox:

We found that we were having problems with maintenance of these one-off systems. It wasn't a program of record. There's no sustainment tail that goes with these ad hoc programs we put them together. And when they started to link in country, it took the effort of folks like Randy to put together the teams that would have the expertise to figure out how to do maintenance, how to sustain them over time, how to get spare parts and to really make these things happen.

LTG (Ret) Bob Lennox:

So, I'm glad that Randy's on the panel. And we'll talk next. Before he does that, I do want to highlight for everybody that my daughter is an Army Major. And she's a psychologist and is deployed to a not to be mentioned base in in Northeastern Iraq today. And they get warning of drone attacks. And it's happened multiple times. And I'm very proud of her. She's able to wake everybody up and get them into the bunkers and a psychologist who who believes, a psychologist is calling in status reports on the fact that everybody's accountable or not.

LTG (Ret) Bob Lennox:

So, I think it's something that we started as a team 16, 17 years ago made such a difference in Kabul there at the end and is making a difference today in Iraq. So, very proud to be involved with this, proud of the team that put it together. I mentioned a fraction of the names of the people that are responsible. Maybe, Randy will mention highlight some more. But I want to thank you for the opportunity today, Riki, to just be able to single those people out, one of the major highlights of my career to be involved in a small way in this program to save soldiers' lives. So, I'll turn it over to you for the important conversations.

Mr. Riki Ellison:

Thank you, Bob. Thank you for your gratitude and recognition of those that made this system. A couple of things I wanted to ask you just for the general public because I think at the same time, the Iron Dome was starting to happen. What's the difference or why did we not bring the Iron Dome into this, and why did we stay with C-RAM? Was it because, obviously, we're using effectively on the ships?

Mr. Riki Ellison:

But if you can explain generally the difference between the two programs and if even that was an option because both of them were at the early development at that stage, I believe.

LTG (Ret) Bob Lennox:

A great thought. What was going on at that time was Iron Dome was still in its developmental stage. The Missile Defense Agency was working with Israel to refine the missiles that are being used there, the

architecture that was being used there. And we couldn't wait. We had to move quickly the idea of Phalanx guns proven demonstrated that they were capable of intercepting the mortars, the rockets, enabled us to move very quickly. And then, the fact that we were able to integrate it with existing systems. Army systems already in theater was ideal.

LTG (Ret) Bob Lennox:

The sense and warn capabilities that came with the FAAD/C squared system melded seamlessly into this one system now. Hats off to what's gone on with Iron Dome and how effective it's been in deterring conflicts, saving lives, frustrating evil people's designs since that time. But it simply wasn't ready and proven at that time.

Mr. Riki Ellison:

The amount of public understanding the Iron Dome is so vast because of the publicity that it has done in a foreign country in a public setting where you look at ours. The C-RAM in our forward operating base and we can't talk about. We can't be proud of it because we don't want to give that information to the enemy.

Mr. Riki Ellison:

I would say from my perspective that it had at least the same amount or more hits and intercepts during that period of time. And they don't get any credit. And this is one of the... We want to recognize that aspect of it. Bob, in your position, also in this position, you knew you had to keep it. It worked. But you had, I don't know what, they're 78 forward operating bases. I mean there are a lot of bases out there.

Mr. Riki Ellison:

Yet, we limited the production of this. We limited the capacity that we could have to defend more bases and defend more deterrent. Can you go into that decision making because I know we limited it out? I don't know what the number of batteries are, but certainly not enough to do what we could do to best defend our forward operating troops for. What were the limits on that, and why didn't we move forward to have more capacity?

LTG (Ret) Bob Lennox:

Yeah. A great question, Riki. I think what we did was we focused first on the large troop population areas and made sure that Victory, Balad Air Base, some of the key places that were being targeted at the time were covered as a first priority. And to do that, we were frankly taking some of this equipment off ships, certainly diverting it before it went on to a ship and taking it off the ships and minimizing their capabilities.

LTG (Ret) Bob Lennox:

So, the Phalanx guns were kind of a long pole at that moment to get that capability everywhere. But the sense and warn capability was proliferating. And what the PM was able to do was to net some of these radars together such that instead of just defending one fob, they were able to architecture and start defending extended area. So, we found that the places that weren't being hit as frequently, if you had a good sense and warn capability that you could save lives that way too. So, I think it was really equipment at the time. But it was the fact that we were able to focus on the most important areas first.

Mr. Riki Ellison:

You would take credit for the defense last January against the strikes from Iran under our bases with this sense and warn capability that you're talking about. Correct?

LTG (Ret) Bob Lennox:

Yeah.

Mr. Riki Ellison:

That would be correct, right? But, Bob, I still want to go to that. We know the requirements. Why aren't we doing more capacity? Why don't we spend more [inaudible 00:19:09]? We knew this system worked. Why didn't we do more because it wasn't a program or record? And really going forward, Bob, I mean why aren't we doing more? Are we waiting for the next [inaudible 00:19:23] to come forward? Just help me. Help us understand that if you can-

LTG (Ret) Bob Lennox:

Yeah. So, it's hard for me to judge what's going on now. I don't want to second guess or judge the people that are in the job that I had years ago that are in it today. At the time, I think it was a capability, the numbers that drove us to a certain number that we could have. Availability of failings, like I said, and numbers of soldiers and effort you could train.

LTG (Ret) Bob Lennox:

Could we have done more? I think in hindsight because it was so successful, we probably could have done more and had more systems out there and more capabilities out there. I was a little bit surprised. It took us so long to get this kind of capability into Afghanistan over time. But we did. But it just took us a little bit longer than I thought we should have.

Mr. Riki Ellison:

Well, thank you, Bob. Your legacy and the decisions you made, this wouldn't have happened. So, you deserve a lot of credit for the courage of your decision-making to put and feel this and make that happen. So, thank you for that, and thank you for spending some time with us on that. Ladies and gentlemen, if you have any questions, please, put in questions at missiledefenseadvocacy.org, and we'll filter them into the discussion.

Mr. Riki Ellison:

Our next guest is a great one, Randy. He is the first general to own for the Futures Command, the Cross-Functional Air and Missile Defense which is future capabilities Air and Missile Defense. I met Randy just at that time probably back in 2004 or '05 when he was a lieutenant colonel of a battalion. And his role was to convert that battalion into a C-RAM battalion which was tremendous. And I give you, sir, a lot of credit. What a wonderful career you've had, an impact you've had, and to be the first in the Futures Command on that Cross-Functional team says a lot about you, sir. So, ladies and gentlemen, Retired Brigadier General Randy McIntire.

BG (Ret) Randall McIntire:

Hey, Riki. Thanks for this opportunity. And it's always great to be a part of these important discussions and General Lennox having the opportunity to collaborate with you again. It's wonderful. And I thank you for the confidence that you had in me those many years ago.

BG (Ret) Randall McIntire:

And I would tell you that this was the high water mark of my career, did a lot of great things over the years. But having the opportunity to implement things, innovate, build units, and go fight them. It doesn't get any better than that, quite frankly. And this provided that opportunity and Dave [Shankle 00:22:20] talked to me. He did a wonderful job as my operations officer as we were in Iraq covering 17 different forward operating bases simultaneously.

BG (Ret) Randall McIntire:

We started a lot of the site surveys from Iraq and Afghanistan. Those discussions were starting to happen as they wanted to move that capability into Afghanistan on our watch. But I tell you what. I think is really important, this was pre the BRAC moved from Fort Bliss to Fort Sill. But you started to see the collaboration this idea of fires happening. And this was at the tactical level with this capability and the sense, the warn, the intercept and then the response piece. That was pretty much the pillars of this capability.

BG (Ret) Randall McIntire:

You had to sense it. If you can't see it, you can't kill it. You need to warn the population. And then, intercept and protect the defended assets. And then, the next important piece was that response piece which went full circle. And that was the collaboration between offensive and defensive fires in aviation and whatever the response element would have been to get after that.

BG (Ret) Randall McIntire:

And we started to see that really working in Iraq. And it took several years to work through that cycle and make a difference. And then, towards the end in Iraq, the response piece was through the Iraqis. So, it was not necessarily a US-led response. And so, as you would expect, that was a little bit slower and took a little bit of time to mature and develop. But it was important to make that transition into the folks that were responsible for protecting their country.

BG (Ret) Randall McIntire:

When I look at the fires piece of this, it's really use a boxer analogy and I've used it numerous times in the past. From a defensive fire position, you're a boxer in the ring, and you're just blocking, and you're blocking. And you're blocking. But you have the inability to strike. And from an offensive field artillery perspective, you're striking you're striking. But you really can't block.

BG (Ret) Randall McIntire:

And so, as we started working on these concepts that would bring the agility, I think that was needed certainly at the tactical level that now as you can see as we move forward in the 21st century. And we start to think about large-scale combat operations and taking on near-peer threats. We need to get back at this and bring that up to the operational theater-level fires in my opinion.

BG (Ret) Randall McIntire:

And so, what was born out of all that was the Fire Center of Excellence. So, I think we're sitting in a postured in a place that we can take the lessons learned from this capability and move it forward and apply it. As it started, it was very immature. And I'm glad General Lennox talked about Mike Van Rassen and the team there and the people like John [inaudible 00:25:46] and all the scientists that were really pulling the stuff together.

BG (Ret) Randall McIntire:

And it was exciting. We were just having this interface back and forth between combat and to... Hey, I really... What about this? Can we get it to do this? Trying to explain why a gun didn't shoot at a projectile flying over it because it was going to land somewhere else outside the gun defended area and just educating leaders on the ground of what the capabilities and limitations of the system was at the time.

BG (Ret) Randall McIntire:

But when you think about the rapid development, a joint urgency operations needs statement that came in and really about less than a year, 11 months some capability provided. At the beginning, did it have its warts? Absolutely, as anyone would expect.

BG (Ret) Randall McIntire:

But they fought through that especially on the sensing horn, getting the radars to work together. Were their false alarms early? Yes. And the team really worked hard to figure out how to start eliminating those things and making the radars work together and get the timing. And then, throwing in that intercept piece and just continuing to do upgrades over time that everybody benefited down the road. You never would see it on your watch. It would come on somebody else's watch, the work that was put into the spiral development of it.

BG (Ret) Randall McIntire:

Again, initially, starting off this Navy system, not a lot of Army folks understanding it, we relied it on our Navy counterparts hugely to operate and maintain the Phalanx weapon system which was their close end weapon system. I remember the fire controllers and just really relying on those guys to keep that system working. So, there was some early lessons learned. And then, we adapted. So, you got to adapt. And the Navy was running its own independent site.

BG (Ret) Randall McIntire:

The Army was running its own independent site initially on in having different levels of success. So, you had the Navy doing very well with their weapon system, but maybe not so well with the command control and plugging into the Army logistics systems and that. You had the Army that was doing okay with the command control and understand how the Army works. But they were having a difficult time maintaining a naval gun system. And then, guys like in the multi-national core headquarters, they came up with the joint intercept battery.

BG (Ret) Randall McIntire:

And what we did was started playing to our strengths between the Army and Navy. And we had these batteries that were both Army and Navy. And that's when I think the turning point and a level of

performance started to happen. You started to see more intercepts, better sense and warn, just across the board increasing the efficiency of the system.

BG (Ret) Randall McIntire:

And that bought time for the Army eventually. Who would have thought we'd still be there 20 years or longer in these systems? But over time, that bought time for the Army to learn that from an industry standpoint now, that allowed them to get the field service representatives, the Navy guys retiring, et cetera, to come in and start to fill a role where the Navy stuck with us for a really long period of time. And, Eventually, the Army took it over.

BG (Ret) Randall McIntire:

And from an Army standpoint, it was a total Army effort. We had the Army National Guard units get involved with this because we were really struggling with the short-range air defense capacity into your question earlier, Riki, about why didn't we have enough of this? Well, it really became down to money and DOTMLPF and units. As we started to divest the short-range air defense force, we still find ourselves very heavily involved with the theater ballistic missile, the TBM force, the patriot force really since Desert Shield and Desert Storm involved in the Middle East.

BG (Ret) Randall McIntire:

So, there wasn't a lot of capacity. So, then again, our field artillery partners, they took some rotations on C-RAM international guards. So, this was a total Army effort to be able to sustain this over a long time. But in closing, it's a really great news story, I think. A lot of Yankee ingenuity at the beginning of taking bits, parts, and kits and pulling it together with some commercial off-the-shelf technologies as well and getting these capabilities put together and continuing to spiral development.

BG (Ret) Randall McIntire:

I'll let Dave talk about training up and MRES and all the stuff that he was hugely successful. And I'd be remiss if I didn't say I had a wonderful XO, Bill [inaudible 00:31:13] that we were able to hand pick the best and the brightest to go forward to do a lot of this work and the young captain, Doug Simmons who's now Lieutenant Colonel Simmons, and just the names you can just go on the list, Command Sergeant Major Paris Williams and others that really, they really made it a team effort.

BG (Ret) Randall McIntire:

And I would also be remiss if I didn't talk about [inaudible 00:31:41] to a degree that was the brigade commander that [inaudible 00:31:45]. He provided the right level of guidance with General Lennox and other leaders to set the tone for success if we had gotten the wrong type of leader. We could have got a totally different result in my opinion.

BG (Ret) Randall McIntire:

They were able to resource you, give you enough guidance. But they didn't micromanage. And this was one of those things where you needed to have the flexibility to move and coordinate and do things on it.

BG (Ret) Randall McIntire:

The final story, I realized we were doing something pretty good when I was in a line at a makeshift PX Shopette that everybody was lined up to go get some gum and other things that we were looking for to

get. And there was a young female soldier that was standing in line in front of me, and she was talking to another soldier. And it was kind of doing, they're doing this little handoff between the two and reminding me of my daughter that's how young she was at the time.

BG (Ret) Randall McIntire:

And she was the one girl looked up and said, "What's that on the hill over there?" We were in Baghdad at a Victory Base. She was, "Oh, that's Maximus." And Maximus was the name of one of our guns that was sitting up there, and she said, "That's maximus, and Maximus keeps me safe. It's going to keep you safe." And she went on to describe, "If you hear the alert, hit the dirt. And they're sensing the warn. And those guns are there. And they're here to protect us."

BG (Ret) Randall McIntire:

And I realized even if that gun didn't work that day, she was able to function. She was able to walk around and do her job with a level of confidence that there was something in place. And I think that to me was a proud moment that I knew we were doing something good, and people were able to function and do their jobs. So, anyway, I'll put pause or I look forward to any questions you got. But thanks because I love telling old war stories.

Mr. Riki Ellison:

[inaudible 00:34:09]. That's top notch. And that's setting the conditions to win, setting the environment to win, stabilizing the environment to win. Because of your positions, you were able to do services basically and meld that together. If we look in the future, do we need to roll a mission the service to develop a certain capability or do we need to do what we just did where we see other capabilities from other services and transition them over?

Mr. Riki Ellison:

And I'm saying this is a successful position here. We're looking at [inaudible 00:34:54] on ground in the same way to some extent. So, from your perspective because again, like you said, you brought diversity of different thought and different ways of doing it and made the system even better than it would have just stayed in those two services. Is that a future way of cross development or is that just too difficult to do and these are only special cases?

BG (Ret) Randall McIntire:

Well, Riki, great question. And never really thought about it. But I do think that the exposure and I said always more minds taking a look at the problem sets probably gives you a better solution in the end.

BG (Ret) Randall McIntire:

I don't know if you can afford to do it every time. But certainly, we could afford to take these systems that some other services invested in and see how they work based upon the requirements and the capabilities needed. But I always love the conversations I had with the sailors that were assigned and working for me because they made us better. They would ask them hard questions.

BG (Ret) Randall McIntire:

It's a difference between the cultures, for sure. And that was something that we had to work on. And I'll never forget Command Sergeant Major Paris Williams. First thing he did, we had everybody together.

And we never actually had everybody together in the states. The sailors, the 200 sailors plus or minus that we had, they came from about 190 different. They're all individual augmentees.

BG (Ret) Randall McIntire:

And then, we had Fort Bliss units, Fort Hood units. And so, I think in the end that actually made us work pretty good in a combat situation being decentralized because we just learned to operate that up front and built that into our [inaudible 00:36:45] rhythm. But Paris Williams told every told the group that we had together, "We're not going to make the soldiers and the sailors. And we're not going to make sailors and the soldiers." But we're going to leverage everybody's strengths and weaknesses.

BG (Ret) Randall McIntire:

From an Army perspective, and I hate to just characterize it, Army wants to lead. They want to lead. They want to be in charge. And they're ready to make a difference. What I learned from the Navy, at least the folks, they were very concerned about knowing what was behind the button and what made it work much.

BG (Ret) Randall McIntire:

I won't say that we're not technical. But they were definitely very, very technical. And they would take things into a degree that I think was much needed, and people in Huntsville, scientists and engineers, could have some great conversations. And finding the right people that can operate between those two worlds was key, I think.

BG (Ret) Randall McIntire:

Somebody who needs to understand how to operate the system versus somebody that knows how to build the system and make it better. And so, having those different types of leaders, I think, propelled it much quicker than would have been if it had been still piped into each individual service.

Mr. Riki Ellison:

Thank you. Thank you. Randy, and the other thing that you really brought up that's so intriguing was the offense defense mix at that level where not only are you doing passive defense, you're doing active defense. But you're doing strike which creates the ultimate integrated deterrent at that level, right? So, again, it looks like this system is a little bit of a pioneer to where we're going on multi-domain force. But we're mixing perhaps hypersonic strike, and we're doing this by the way Army Navy's doing the same thing you're doing with hypersonic strike with Neil Thurgood.

Mr. Riki Ellison:

And now, mixing our fires, I know we do it at the schoolhouse, but actually doing it out and above in a forward operating theaters, in our regional theaters to create a much stronger deterrent. So, you want to comment on that because I think this is really well received at the low tactical level? I know there's a lot of policy engagement when you start moving it to a much higher level with patriot, with our next generation [inaudible 00:39:15] with all that stuff coming and even higher.

Mr. Riki Ellison:

And that's what you heard Chase Richardson all that big level going integrated deterrent. But I'll leave that little thought to you. Go ahead.

BG (Ret) Randall McIntire:

What I'll say was this was a great leadership laboratory across the board. And we were able to take some of these concepts of the Fires Center of Excellence was, I think, a vision that we were pushing towards at the time. And this really lend itself to again at the tactical level working just trying to get all the radars working together.

BG (Ret) Randall McIntire:

The fire finders, the LCMRs. We had the Saab Giraffe radar. Multitude of different radars forced us to think about things. And then, just the sensor management piece. What we learned many lessons there is just because you've got a radar doesn't mean you need to turn on because there's a lot of kit that was getting pushed out to the brigade combat teams, and et cetera.

BG (Ret) Randall McIntire:

So, just working through, that feeds into what the one-one-one strategy was a one sensor, one shooter, and one command control, very simplified and thought a little harder to do in reality. But they're certainly with these different things out there, we should be able to leverage and get the most out of what this particular radar was designed to do because they're all optimized a little bit differently when you really get to understand what these things do.

BG (Ret) Randall McIntire:

But I think we're definitely on the front edge. And there's a lot of applications to moving things forward. I think the Army modernization, the Army Futures Command is really setting the pace in terms of what's really, really important. And there's no doubt too the six Army priorities are sitting on Fort Sill, Oklahoma with long-range precision fires and air missile defense.

BG (Ret) Randall McIntire:

So, I think everybody sees the value. I think when you look at a battlefield in the future in 2050, you're going to have capabilities that are just working simultaneously together or we're going to get our [inaudible 00:41:46]. You can't say, "Hey, I'm blocking. Hey, I'm striking" It's going to have to be block, strike, move on.

Mr. Riki Ellison:

Thanks, Randy. That's awesome. Our next speaker, former retired Colonel Dave Shank of the 10th AAMDC, was Randy's operations officer. I think we've done a lot of deep discussion so far, Dave. We really for the general public, they really don't know how this thing works. Can you maybe as the operations guy tell everybody how the thing works and some of the cool things about it, the ammo and all that stuff? Just a real brief because I think we've dodged that a little bit. And that's something that's important for people to understand and how it actually protected the Kabul Airport and so forth.

COL (Ret) David Shank:

Yeah. Sure. Thanks, Riki. And thanks to you and your team at the Missile Defense Advocacy Alliance for allowing me to participate today with two heavy hitters. You've got the dull tool in the shed here now and to somewhat mimic General McIntire's words and General Lennox. I was only as good as the people around me. It was guys like Schneider and Wade and McDonald and others that really was taking the fight to the enemy every day during our deployment.

COL (Ret) David Shank:

I can answer several of those questions. And that's what I did want to do. So, I appreciate that, Riki, about having the opportunity to talk about the tactical level of not just war fighting and not just the story of task force 33 and our deployment to Iraq. But what that correlation looks like with what we saw just less than a week ago at HKIA, Hamid Karzai International Airport there in Kabul, the only US coalition location at the time in Afghanistan.

COL (Ret) David Shank:

So, really, you didn't have to tell the enemy more than that. So, you talk about an enemy moving to the sound of guns to a single target. It was only just really a matter of time before there was some type of indirect fire event at HKIA.

COL (Ret) David Shank:

But before I get into the correlation piece, if I may, and I'll try to be brief, in the case of task force 33, what it came down to really in my mind was basic warfighting fundamentals, things such as the military decision making process, understanding air defense artillery and employment principles such as mutual support weighted coverage, balanced fires. General McIntire talked about the gun there at Camp Liberty Maximus and its tactical location, yes, on a hilltop, but yet still has both the negative and, obviously, the positive angle to conduct engagements and provide those defensive fires to those critical assets that it was assigned to that position to do just that.

COL (Ret) David Shank:

Again, the fundamentals, understanding enemy, tactics, techniques and procedures, leveraging the intelligence community at all echelons, government and non-government, American and non-American, integration with battle space owners. General McIntire talked about the 17 forward operating bases which we had capability and the integration that down to the sergeant level at times integrating with battalion commanders, these are infantry battalion command at a FOB such as maybe Gary Owen out in Diyala Province.

COL (Ret) David Shank:

And you talk about austere environment that young sergeant leading those seven or eight soldiers and doing just that tasks that we normally require lieutenants and captains to perform and do so at the requisite level. And then, one other maybe fundamental to talk about is battle drills. General McIntire talked about offensive defensive fires and how do you come full circle. You take an indirect fire shot to the face, so to speak, at a FOB. Is there a call for fire mission possible? Is there an aviation hunter killer team within proximity to conduct some type of flyover, some type of show of force, some type of counter fire strike from air surface?

COL (Ret) David Shank:

And those battle drills were extremely challenging. And you were asking young soldiers, privates and corporals, to be able to respond within seconds to provide that. Understanding the enemy and who you're fighting against. I've heard the boxing analogy. I heard some baseball and football analogies. I mean know your enemy and understand what their capabilities are and that they're ever evolving, and they're working through elementary and crude ways to better themselves, so they can be successful in killing Americans and coalition service members and civilians.

COL (Ret) David Shank:

We saw some of these crude, very elementary tactics pickup trucks with simply tubes in the back left in a field or simply just tubes left in a field with a washer or a dryer timer to go off in 30 minutes, and what have you. General McIntire, he talked about the composition. The only thing I would submit is the task force was put together. And I would submit months versus years.

COL (Ret) David Shank:

It formulated out of Fort Hood and Fort Bliss. And as mentioned, when the sailors came to Fort Bliss for their mobilization process, that was our first time truly meeting the entire group of sailors and the majority of more maintainers. And they did bring that diversity. And I'm not talking about the skin, color, or the gender. But I'm talking about the diversity of the mind and how they thought from a Navy culture. And it is different from an Army culture. And so, to have a different style of thinking and putting that in place and leveraging that style of thinking was beneficial to the entire task force.

COL (Ret) David Shank:

And we talked about the cultures of both the Army and the Navy. The senior sailor for each of those joint integrated batteries was the de facto deputy commander to the captain guys like Tony Doonan and Doug Simmons as mentioned earlier. The other is John Brock. A couple of differences like talk about the guns itself, we talked about the close-in weapon system what you see on the ship, different type of round fire, armor piercing on a ship for a C-RAM weapon system, the Phalanx gun fired the self-destruct high explosive type weapon, tracer burnout so extremely important because the question always came from senior leaders is what happens when the rounds hits the ground.

COL (Ret) David Shank:

Well, it self-destruct. So, that was always a positive. The Phalanx weapon system on that flatbed truck, it was capable. It had two radar search and track radar. So, it was capable of conducting a manual or as you were a automatic engagement. But as the soldiers and the sailors continue to refine their TTPs at their respective locations and as general McIntire talked about a large number of false alarms early on, false alarms decreased and soldiers also recognized these named area of interest and after studying where the enemy had been conducting any type of actions that they were prepared and can conduct a manual engagement vice waiting for a second sensor to recognize any type of indirect fire attack.

COL (Ret) David Shank:

General McIntire mentioned some of the radars and the integration. That was really significant and what a great lead and to where we are today with everything that transpired in and around the Baghdad area and that network of sensors from the Giraffe. Well, the Mambo was down south initially with the British. But the Q36s and 37 firefighter radars, General Lennox mentioned the lightweight counter mortar radar, the sentinels there to clear airspace all connected in one architecture over both the wired and wireless through internet protocol.

COL (Ret) David Shank:

You never have enough when it comes to the high demand low density. So, leadership provides you the critical asset list. And you defend specific areas based on where those assets rack and stack. So, I say that because of the passive measures that are needed. Again, something you saw both in Iraq and

Afghanistan specifically at HKIA. You got the hardening, the T-walls, the rocket roofs, the dispersion and so forth.

COL (Ret) David Shank:

And as it gets short on time, I wanted to just very quickly talk about every event, every RAM attack, rocket artillery mortar, there was detailed analysis done as mentioned by both speakers. And that analysis was sent back to the states as well. So, the scientists and the engineers could actually help out and provide that information back to us in the event we needed to make an adjustment or tweak left or right.

COL (Ret) David Shank:

I think General McIntire mentioned high water. I think the high water event for Task Force 33 was not just when the British departed Iraq and the responsibility they had for Basra. But shortly thereafter, American soldiers were killed. General Jacoby, the first core commander said, "Hey, come up with a plan. How do we put guns in Basra?" We conducted the deliberate yet hasty military decision making process. Put guns in Basra. And it was within 48 hours that there was a successful engagement because those enemy actors in Southern Iraq were firing a long-range 122 millimeter rockets.

COL (Ret) David Shank:

And they were really poking their fingers in the chest of the Americans down there because they fired them every Thursday for five weeks between eight and 10:00 PM from 15 kilometers or more demonstrating that they knew exactly how to pinpoint those rockets. And so, the move and the decision making by General McIntire and the first core leadership of John Jacoby and mentioned JD Johnson and others was tremendous and the support greatly appreciated. As I close it out real quick, Riki, and I apologize for going a minute over, just a couple of thoughts.

COL (Ret) David Shank:

We've got to figure out how to replace this system because it's just one portion of a layered air missile defense capability that is much needed. And we've got to do it fast. We've got to speed up the acquisition process. I mean again, this is a capability you heard from General Lennox, from General McIntire. I mean this capability was rapidly put together from a urgent needs statement, from a commander in the Middle East. And within less than a year, the Fort Bliss was producing formations to go fight and win in support of the formations forward.

COL (Ret) David Shank:

Again, we've got to identify command and control suite and what that looks like, the C-RAM, traditionally had FAAD C2 as mentioned previously. But we've got to come up with that type of swing. We've got to think forward here, either the buzzwords, artificial intelligence, machine learning, machine to machine taskings come to mind. But how do we get beyond that? And it starts with a command control suite, and then sensors and then the actual kinetic and non-kinetic capability. Riki, I'll stop there. Again, thanks. Appreciate it. God bless our soldiers and service members who continue to perform our work forward deployed around the world. Thanks, again. Riki.

Mr. Riki Ellison:

Dave, just one or two questions real quick. Can you give us the rounds per minute just so people know what that is? And, secondly, how many troops have done this mission, National Guard and Army since you first deployed it? And how many troops have done this mission or are doing this mission, did the mission in the Kabul Airport, so people understand what that size of that force is? And there's limiting factors on that. But I just wanted to get that little understanding of what it takes. And, maybe, if you can throw in what's the most challenging job? I guess you can't pick, but what's the most challenging training you have to do for one of those positions? What position is that? That may be too much, but I just wanted to hit that real quick before we open it up for questions.

COL (Ret) David Shank:

Sure. I'll try to hit the highlights. Again, we talked about the 20-millimeter round and the difference between a CIWS and a phalanx on the ground. The rate of fire is about 75 rounds per minute... As you were, 75 rounds per second, excuse me. And a standard engagement could be anywhere from really, depending on the threat, anywhere between 250 and 500 rounds. I mean if it's multiple rockets inbound and it's targeting a specific defended area of one or two guns, well, you might only just have those one or two guns engaging targets while a number of guns sit quiet, something that had to be reinforced not only with leaders, but just others throughout the theater that if around is not going to impact in a defended area, the gun will purposely not engage that target.

COL (Ret) David Shank:

But if you're within earshot of a warning, take cover, take cover. You got to take cover. The number of soldiers and I see General McIntire on the screen, if I recall right, the combined task force was around 400. Is that about right, sir? Yeah. And then, as I understand it at HKIA, and I'd be remiss if I didn't mention them, it was the first 101st field artillery battalion out of Massachusetts Army National Guard who was performing the mission at the time.

COL (Ret) David Shank:

And, Riki, I don't know if it was a battery plus, but that would be my assumption that probably anywhere between 50 to 100 soldiers performing that mission set. And as I understand it, they manned those guns up until the very last five aircraft. And so, they were soldiers who boarded those five aircrafts just before the 82nd Division Commander. We've all seen that picture.

Mr. Riki Ellison:

Thank you, Dave. I'm going to turn it over now to my fellow MBA senior fellow, Retired Major General Joaquin Malavet to add his perspective and open up to the public. Joaquin.

MajGen Joaquin Malavet:

Riki, thank you very much. It's always an honor. And I think everyone would agree that this panel is absolutely extraordinary from the comments that we've received and, quite frankly, from the questions that really range from strategic to the tactical.

MajGen Joaquin Malavet:

What I thought I would do to honor the panelists is bend these things in a way that makes sense. I would first like to address two themes that really came out of the comments which I think are profound and

relate quite frankly to what, Riki, you have said and what you have written. And I'll cover those two themes which lead into as a setup the two types of questions that we received.

MajGen Joaquin Malavet:

One is broadly speaking about the tactical nature of the systems, and I'll cover that as we go forward. And the panelists can pick and choose which one of the questions or a combination of those questions that you want to answer. And then, two, kind of the strategic way forward. So, I begin with the first theme. I think there was general consensus that we must set national policy for defining what we must defend within the United States homeland. But do it in a way that has a global perspective with our allies and partners.

MajGen Joaquin Malavet:

And who might be best postured to defend those particular locations with our allies and partners? There's also comments on the fact, and I'm synthesizing here that we must be clear-eyed about those defined capabilities and David talked to it. And what we should have the services developed? And then, integrate those capabilities within the right systems and forces. And I think General Lennox touched on the fact that you must achieve synergy, effectiveness, efficiency. And it all has to be affordable.

MajGen Joaquin Malavet:

The second theme that was brought forward was that integrated strategic deterrence and defense that supports a larger broader national grand strategic design must include these tactical capabilities. It must all be layered as we've witnessed in Afghanistan. And this is what was brought out in some of the questions. Even technologically sophisticated systems in the hands of most courageous combat proven warriors saves lives. But perhaps more importantly linking wise and seasoned national security policy to campaigns to operations down through the tactics and to proven defensive weapon systems that could be used in unique ways in terms of operational art will save lives, livelihoods, and nations.

MajGen Joaquin Malavet:

So, the first questions or the sets of questions were bend and the panelists can talk about that, a lot of thoughts on Afghanistan as a microcosm in terms of the types of threats that we saw beyond rockets, beyond artillery, beyond mortars, AI, ML-enabled artificial intelligence, enabled UAS systems. Even some of our known terrorists are now highly sophisticated in terms of their operational art and capabilities. So, your perspectives on the threats, your perspective on the performance capabilities of our tactical systems, and then your thoughts on what we need to think about in terms of future systems. That's the kind of the first bin of those questions, more tactical, threats, performance parameters in the future.

MajGen Joaquin Malavet:

The second question perhaps more importantly there is consensus that getting it right, right now with the right investments in weapon systems and organizational responsibilities and was touched on with diversity of thought and some of the roles and the nature of the role is being changed, is a national security imperative. So, the second question seeks your thoughts and perspectives on how we might be able to balance and prioritize current and future investments across the range of missile defense and defensive weapons systems at the tactical through to the strategic level. Again, Riki, thank you. And probably, its best to have General Lennox go first and followed by General McIntire, then David as a clean-up.

LTG (Ret) Bob Lennox:

I thought I'd start, Joaquin. What great questions, wow. The second question that you just asked about prioritization and balance future weapons between the strategic to the tactical, man, I wish there was an easy answer for that. That's a challenge that has faced us as a nation, as an Army, as a missile defense community for decades. The threats are evolving so quickly.

LTG (Ret) Bob Lennox:

Tactical threats could have strategic impacts if something had gotten through in Kabul and the catastrophic strategic impact that might have had there. So, a very, very tough question. It doesn't have a very easy answer. And I think we're always going to be asking ourselves, "What do we do next? How do we integrate capabilities to make them better than what they are today?" And the very nature of our defensive weapon systems has always been kind of like an insurance policy.

LTG (Ret) Bob Lennox:

The nation doesn't want to spend too much on them. But they want them there when they need them. And when you need them, they got to deliver, and they got to perform. So, it's this fine line of being able to address the range of capabilities that [inaudible 01:05:22] out there from near-peer competitors through nations like Iran and North Korea to the kind of drone usage that we've seen in Azerbaijan and Armenia. It's a very, very tough question that I don't have a very good answer for. But I'm sure Randy or Dave could pitch in on that and probably solve it for us. So, I'll pause there and turn to them.

MajGen Joaquin Malavet:

And Randy, just a quick note that we did have some parts of the questions, did speak to Iron Dome, C-RAM, and the integration JADC2 IBCS, that sort of thing. So, it was kind of a mid-level operational art with systems that folks were interested in hearing more about.

BG (Ret) Randall McIntire:

Okay. Well, great. Thanks for... Let me try to build this out a little bit more. And thanks for setting the stage, General Lennox. So, kind of staying with this integrated strategic defense, some of the big thoughts I had were air defense, defense. So, it's one of these capabilities that I think we find ourselves with our allies and partners and ever since really Desert Shield, Desert Storm that really the price of the mission to a country to have access has been a patriot unit.

BG (Ret) Randall McIntire:

I think it sells well. I think we find ourselves in a predicament a lot of times with our strategic flexibility with these capabilities as Dave mentioned earlier, high demand low density. But it sells well. When you think about leaders of different countries, they're able to bring capability that shows US commitment on the ground while not putting armored division or a brigade combat team that can do some offensive invasion type things that make people nervous. So, in terms of how you deter and maybe escalate bringing in a defensive capability like this, sometimes, is almost the perfect answer.

BG (Ret) Randall McIntire:

As you take a look at all the multiple threats and certainly the counter-UAS environment today is just exponential expanding every day. Yeah. You need a layered interior defense from the tactical to the strategic level. And they need to be linked and work together. There's no silver bullet solution. So, part

of it is educating decision makers that you need a toolbox of capability. They don't like it because it's costly.

BG (Ret) Randall McIntire:

And at the tactical level, obviously, you don't want to shoot a patriot missile at something like that because it's unaffordable, and you'll lose your blood and treasure really fast doing something like that. So, you got to develop these capabilities from the tactical to the strategic. And they all have to work. You'll get some people. And I'll give you. I won't say any names. But when I was the commandant, I would go into the meetings in the Pentagon. And they'd say, "Well, we got a THAAD radar. It's used forever. Why can't we just take the THAAD radar and tie it to whatever system and call it a day?" And they need to be educated.

BG (Ret) Randall McIntire:

So, you always got to figure out how to be smoother and articulate in terms of how you answer these questions because, ultimately, they control a lot of the purse strings there and at Capitol Hill. But having a networked sensor capabilities all talking to each other, I think, is key where you pick the best shooter to take care of the mission. And I'll stop.

MajGen Joaquin Malavet:

And, David, as we try to link some of the tactical systems to space-based capabilities, I know we perhaps didn't touch on that. But as Randy stated, all has to be linked from the ground. And space is the kind of a new arena that people are trying to link their systems to.

COL (Ret) David Shank:

Yeah. Thanks, Joaquin. Yeah. I think an all-domain approach is a must which includes information electronic warfare as well. I think we'd all agree that space is getting very crowded especially the lower earth orbit area.

COL (Ret) David Shank:

And so, going back to my comments earlier, I think it starts with the command and control suite or suites where you have that network architecture where you're able to communicate across all domains where you have that sensor capability which General McIntire just mentioned. And we've heard from this week during the fires conference regarding IBCS, any sensor based shooter. And I don't just mean from an air and missile defense sensor base shooter, but again across all domains. And I think there's a need to think not only just kinetic, but non-kinetic also.

COL (Ret) David Shank:

There are times when you don't need to fire a big bullet. And we as an American force, I've had the privilege to watch and observe some of these non-kinetic strikes that will put an adversary on their knees very quickly and render them helpless for lack of better terms. The only other point I would make, Joaquin, just kind of in a broad comment is really a relook at the policy in general and policies as an American that we tend to play fair. And I think sometimes, we also tend to focus on yesterday's news.

COL (Ret) David Shank:

And we've got to continue to look forward and be forward thinking and recognize, and let's just call it what it is, what our peer competitors are up to, People's Republic of China, What is Russia? What are they up to? What are some of these rogue nations focused on in the DPRK and Iran? And what are some of the non-state actors focused on and working towards? And we've got to recognize that some of this is through, I mentioned, policy. But some of this is also through the use of legacy systems. There are legacy systems that can still be leveraged, but yet continuing to look towards the future. Thank you.

MajGen Joaquin Malavet:

Thank you. Riki, before I turn it over to you, just a couple comments as the folks are very interested and certainly I think this panel probably could have gone another two hours. We covered micro-tactical, the relevancy of Afghanistan, the linkages to the global landscape. Everything is shifting. It's more complex, more lethal, more uncertainty. But the certainty of the bloodlines of courage, I don't need to say this, but I think it's important for those that may be listening from generation to generation is solid. It's sound. It's still about warriors, weapons, and ways and how we combine it.

MajGen Joaquin Malavet:

And General Lennox, you mentioned your daughter. And I will say that I am a son of a soldier. My father served in the 76 tank battalion, 11th Airborne in the '50s. So, again, I want to thank all three of you as fellow warriors and turn it over to Riki as the preeminent warrior. And again, thank you very much for the opportunity. Riki.

Mr. Riki Ellison:

Thank you, Joaquin. And in conclusion, the three of you and maybe a thousand of your soldiers, you've pioneered something that's spectacular. That's something that we're going to try to duplicate and be better at before it's time to rapidly put a system in place at urgent need to do the things you did with cross-service integration and make it work and make it work so effectively that we could reduce the suffering. WE could make that evacuation. We could and did defend the thousands and thousands and thousands of our troops over there, allies over there, is something that you...